

Patent claims

1. Method for manufacturing cement clinker by which method cement raw meal is preheated and burned in a plant comprising a cyclone preheater (1) and a kiln (5), **characterized in**
- that at least a portion of the raw meal is extracted from the cyclone preheater (1),
 - that this raw meal is introduced into a separate unit (21) in which it is given a retention time under oxidating conditions provided by means of a gas stream for forming SO₂ and for expelling organic carbon,
 - that the formed SO₂ and the expelled organic carbon are subsequently discharged from the separate unit (21) entrained in the gas stream for further treatment in a subsequent process stage, and
 - that the raw meal is reintroduced into the cyclone preheater (1).
2. Method according to claim 1, **characterized in** that all of the raw meal is extracted from the cyclone preheater (1) for oxidation in the separate unit (21).
3. Method according to claim 1 or 2, **characterized in** that the raw meal is extracted from the cyclone preheater (1) at a temperature between 350°C and 525°C.
4. Method according to claim 1 or 2, **characterized in** that the raw meal is extracted from the cyclone preheater (1) at a temperature between 400°C and 500°C.
5. Method according to claim 1 or 2, **characterized in** that the temperature in the separate unit (21) is kept substantially constant during the oxidation process.
6. Method according to claim 1 or 2, **characterized in** that the raw is given a retention time in the separate unit (21) within the range of 10 to 200 seconds, preferably within the range of 10 to 100 seconds.

7. Method according to claim 1 or 2, **characterized in** that the that the formed SO_2 and the expelled organic carbon , and which is discharged from the separate unit (21), is introduced into the calciner (3) of the cyclone preheater.
- 5 8. Method according to claim 1 or 2, **characterized in** that the extracted and separately oxidated raw meal is introduced into the cyclone preheater (1) immediately after the point where it was extracted, viewed in the direction of flow of the raw meal.
- 10 9. Plant for carrying out the method according to claim 1 comprising a cyclone preheater (1) and a kiln (5), **characterized in** that it comprises means (13, 15) for extracting at least a portion of the raw meal from the cyclone preheater (1), separate means (21) for giving this raw meal a retention time under oxidating conditions and thereby ensuring oxidation by means of a gas stream of sulphide
15 contained in this raw meal for the formation of SO_2 and for the expulsion of organic carbon, means (17) for discharging the formed SO_2 and the expelled organic carbon from the separate unit (21) entrained in the gas stream for further treatment in a subsequent process stage, and means (26) for reintroducing the raw meal into the cyclone preheater.
- 20 10. Plant according to claim 9, **characterized in** that it comprises a wet scrubber (31) for treatment of the formed SO_2 , which is discharged from the separate unit (21) entrained in the gas stream.